

DEVELOPMENT OF A TOOL TO DESIGN AC HARMONIC FILTER FOR HVDC
TRANSMISSION SYSTEM

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**DEVELOPMENT OF TOOL TO DESIGN AC HARMONIC FILTER FOR
HVDC TRANSMISSION SYSTEM**

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LIST OF SYMBOLS

I_a	-	Line Current
I_1	-	Fundamental current
I_d	-	Direct current
I_r	-	Current through resistor
I_L	-	Current through inductor
I_c	-	Current through capacitor
I_h	-	Harmonic current
I_f	-	Current through filter
I_s	-	Current through system
$ I_r $	-	Absolute value of current through resistor
I_{rms}	-	RMS current
IT	-	Harmonic current factor
$(I_L)_h$	-	Inductor current at harmonic loading

V_s	- Voltage supply
V_L	- Line voltage
V_1	- Fundamental voltage
V_h	- Harmonic voltage
V_{Lh}	- Worst harmonic voltage
V_c	- Voltage across capacitor
V_L	- Voltage across inductor
V_r	- Voltage across capacitor
Z	- Impedance
Z_S	- System impedance
Z_f	- Filter impedance
Z_t	- Total impedance
Z_{st}	- Single tuned filter impedance
Z_{hp}	- High-Pass filter impedance
Y_s	- System admittance

Y_f	- Filter admittance
Y_t	- Total admittance
Y_{st}	- Single tuned filter admittance
Y_{hp}	- High-Pass filter admittance
Z_{f5}	- The 5 th filter impedance
Z_{f7}	- The 7 th filter impedance
Z_{f11}	- The 11 th filter impedance
Z_{f13}	- The 13 th filter impedance
Z_{hp}	- The high pass filter impedance
Y_{f5}	- The 5 th filter admittance
Y_{f7}	The 7 th filter admittance
Y_{f11}	- The 11 th filter admittance
Y_{f13}	- The 13 th filter admittance
Y_{hp}	- The high pass filter admittance
Y_{FA3}	- The total filter admittance of the 3th harmonic

- YFS3 - The system filter admittance of the 3th harmonic

- YT3 - The network filter admittance

- V3 - The 3th harmonic voltage

- I1 - The fundamental frequency current

- I3 - The 3th harmonic current